

ACTGTCTGGAAGTGGACTGAGTCACCAAAAGGCGAATGGCTTCATCTTATAAAATGTCTGAACAAAGCACA
ACTTCTGAGCACATTTTACAGAAGACATGTGATCACCTGATCCTGACTAACCCTTCTGGATTAGAGACAGA
CTCAGTAGCAGAGGAAATGAAGCAGACTGTGGAGGGACAGGGGCATACAGTGCACCTGGGCAGCTCTCCTGA
TACTCGCGGTGATAATACCCACCATTGGTGGGAACATCCTTGTGATTCTGGCTGTTGCACCTGGAGAAAAGG
CTGCAGTACGCTACCAACTACTTTTTAATGTCCTTGGCGATAGCAGATTGCTGGTTGGATTGTTTGTGAT
GCCGATTGCCCTCTTGACAATCATGTTTGAGGCTATATGGCCCCCTCCCACTGGCCCCGTGTCTCCTGCCCTGGT
TATTCCCTCGATGTTCTCTTTTCAACTGCCTCCATCATGCATCTCTGTGCCATTTCCCTGGACCGCTATATA
GCCATCAAAAAAGCCAATTCAGGCCAATCAGTGCAACACCCGGGCTACTGCATTTCATCAAGATTACAGTGGT
ATGGTTAATTTCAATAGGCATCGCCATCCCAGTCCCTATTAAAGGAATCGAGACTGATGTGATTAATCCAC
ACAATGTCACCTGTGAGCTGACAAAGGACCGCTTTGGCAGTTTTATGGTCTTTGGGTCACCTGGCTGCTTTC
TTCGTACCTCTCACCATCATGGTAGTCACTTACTTTCTCACCATTACACTTTTACAGAAGAAAGCTTACTT
GGTCAAAAAATAAGCCACCTCAACGCCTAACACGGTGGACTGTGCCACAGTTCCTTAAGGGAAGACTCAT
CCTTTTCATCACCAGAAAAGGTGGCAATGCTGGATGGGTCTCACAGGGATAAAATTCCTACCTAACTCAAGT
GATGAGACACTTATGCGAAGAATGTCCTCAGTTGGAAAAAGATCAGCCCAAACCATTTCTAATGAGCAGAG
AGCCTCGAAGGCCCTTGGAGTCGTGTTTTCTCTTTTCTGCTTATGTGGTGCCCCTTTTTTATTACAAATC
TAACTTTAGCTCTGTGTGATTCCCTGCAATCAGACCACTCTCAAAACACTCCTGGAGATATTTGTGTGGATA
GGCTACGTTTCTCTCGGGGGTGAATCCTCTGATCTATACACTCTTCAATAAGACATTTCTGGGAAGCATTTGG
CAGGTACATCACCTGCAATTACCGAGCCACAAAGTCAGTAAAAGCACTTAGGAAGTTTTCCAGTACACTTT
GTTTTGGGAATTCAATGGTAGAAAACCTCTAAATTTTTTCAAAAACATGGAATTCGAAATGGGATCAACCCCT
GCCATGTACCAGAGCCCAATGAGGCTCCGATGTTCAACCATTAGTCCCTCATCAATCATCTCCTCGATAC
CCTTCTCACTGAAAACGATGGCGACAAAGCGGAAGAGCAGGTCAGCTACATATTCAGGAACGGGCCGCC
TCATCTTGAGAGAGGGTGATGAGCAGGACGCACGCGCACCATGGCAGGTTCAAGAGTGA (SEQ ID NO:1)

MASSYKMSEQSTTSEHILQKTC DHLILTNRS GLETD SVAEEMKQTV EGQGHTVHWA ALLLILAVI IPTIGGN
ILVILAVALEKRLQYATNYFLMS LAIADLLVGLFVMPIAL LTIMFEAIWPLPLALCPAWLFLDVL FSTASI
MHLCAISLDRIYIAIKKPIQANQCNTRATAFIKITVWVLISIGIAIPVPIKGIETDVINPHNVTCELT KDRE
GSFMVFGSLAAFFVPLTIMVVTYFLTIHTLQKKAYLVKNKPPQRLTRWTVPTVFLREDSSFS SPEKVAML D
GSHRDKILPNSSDETLMRMSSV GKRSAQTISNEQRASKALGVVFFLFLMWCPFFITNLTLALCDSCNQ T
TLKTLLEIFVWIGYVSSGVNPLIYTLFNKTFREAFGRYITCN YRATKSVKALRKFSSTLCFGNSMVENS KF
FTKHGIRNGINPAMYQSPMLRRCSTIQSSSIILLDTLLTENDGDKAEEQVSYILQERAGLILREGDEQDAR
APWQVQE (SEQ ID NO:2)

FIGURE 1

Underlined = deleted in targeting construct

Bold = sequence flanking Neo insert in targeting construct

ACTGTCTGGA**ACTGGACTGAGTCACCAAAAGGCGAATGGCTTCATCTTATAAAATGTCTG**
AACAAAGCACAACTTCTGAGCACATTTTACAGAAGACATGTGATCACCTGATCCTGACTA
ACCGTTCTGGATTAGAGACAGACTCAGTAGCAGAGGAAATGAAGCAGACTGTGGAGGGAC
AGGGGCATACAGTGCAGCTGGGCAGCTCTCCTGATACTCGCGGTGATAATACCCACCATTG
GTGGGAACATCCTTGTGATTCTGGCTGTTGCACTGGAGAAAAGGCTGCAGTACGCTACCA
ACTACTTTTTTAATGTCCTT **GGCGATAGCAGATTGCTGGTTGGATTGTTTGTGATGCCGA**
TTGCCCTCTTGACAATCATGTTTGAGGCTATATGGCCCCCTCCCACTGGCCCTGTGTCCTG
CCTGGTTATTCCTCGATGTTCTCTTTTCAACTGCCTCCATCATGCATCTCTGTGCCATTT
CCCTGGACCGCTATATAGCCATCAAAAAGCCAATTCAGGCCAATCAGTGCAACACCCGGG
CTACTGCATTTCATCAAGATTACAGTGGTATGGTTAATTTCAATAGGCATCGCCATCCAG
TCCCTATTAAAGGAATCGAGACTGATGTGATTAATCCACACAATGTCACCTGTGAGCTGA
CAAAGGACCGCTTTGGCAGTTTTATGGTCTTTGGGTCAGTGGCTGCTTTCTTCGTACCTC
TCACCATCATGGTAGTCACTTACTTTCTCACCATTACACTTTTACAGAAGAAAGCTTACT
TGGTCAAAAATAAGCCACCTCAACGCCTAACACGGTGGACTGTGCCACAGTTTTCTTAA
GGGAAGACTCATCTTTTTCATCACCAGAAAAGGTGGCAATGCTGGATGGGTCTCACAGGG
ATAAAATTCCTACCTAACTCAAGTGATGAGACACTTATGCGAAGAATGTCCTCAGTTGGAA
AAAGATCAGCCCAAACCATTTCTAATGAGCAGAGAGCCTCGAAGGCCCTTGGAGTCGTGT
TTTTCTTTTTCTGCTTATGTGGTGCCCTTTTTTATTACAAATCTAACTTTAGCTCTGT
GTGATTCCCTGCAATCAGACCACTCTCAAAACACTCCTGGAGATATTTGTGTGGATAGGCT
ACGTTTCCTCGGGGGTGAATCCTCTGATCTATACACTCTTCAATAAGACATTTCGGGAAG
CATTTGGCAGGTACATCACCTGCAATTACCGAGCCACAAAGTCAGTAAAAGCACTTAGGA
AGTTTTCCAGTACACTTTGTTTTGGGAATTCATGGTAGAAAACCTCTAAATTTTTTCACAA
AACATGGAATTCGAAATGGGATCAACCCTGCCATGTACCAGAGCCCAATGAGGCTCCGAT
GTTCAACCATTCAGTCCCTCATCAATCATCCTCCTCGATACCTTCTCACTGAAAACGATG
GCGACAAAGCGGAAGAGCAGGTCAGCTACATATTGCAGGAACGGGCCCGCCTCATCTTGA
GAGAGGGTGATGAGCAGGACGCACGCGCACCATGGCAGGTTCAAGAGTGA

FIGURE 2A

Gene Sequence
Structure *

130 bp

Sequence Deleted

319 bp

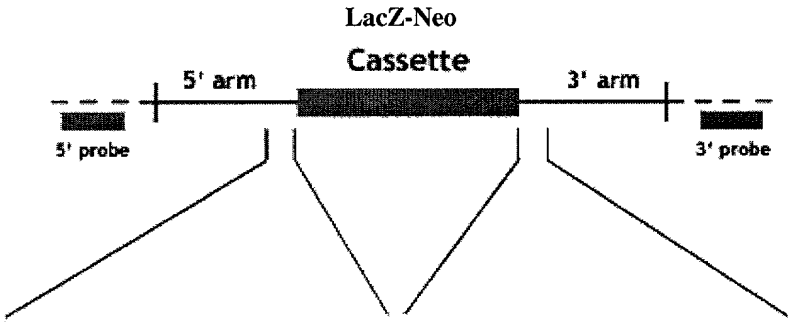
Size of full-length
cDNA: 1550 bp



Targeting Vector* (genomic sequence)

Construct Number: 2520

Arm Length:
5': 1.6 kb
3': 5 kb



————— Targeting Vector
- - - - - Endogenous Locus

* Not drawn to scale

5'> TGAGTGTCTGGTGGGTTTGCT AAATGCTTTGCTAAAGCAGATGAC TTGCTTAGCTACTGACCATGCTGA CCACTGTCTGGAAGTGGACTGAGT CACCAAAAGGCGAATGGCTTCATC TTATAAAATGTCTGAACAAAGCAC AACTTCTGAGCACATTTTACAGAA GACATGTGATCACCTGATCCTGAC TAACCGTTCTG<3' (SEQ ID NO:3)	5'> GGCGATAGCAGATTTGCTGGT TGGATTGTTTGTGATGCCGATTGC CCTCTTGACAATCATGTTTGGTGA GTATTTCCCCTTGTTTCTGCCACT GAACACTACTAACGTAGTGAAATG GACACTCACTGACCTTTATTTTGT TTGAAATAAAAGAAGGACCTGGAT TAAAAACACAGAAGGGAACATTCC TTCATTTTTC<3' (SEQ ID NO:4)
--	---

FIGURE 2B